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ABSTRACT

This report presents a meta-analysis of research on teaching expressive writing to students with learning disabilities. Virtually all the interventions analyzed were multifaceted and involved students writing everyday as part of the curriculum. The meta-analysis identified several themes critical to effective writing instruction: (1) adherence to a basic framework of planning, writing, and revision; (2) explicit instruction of critical steps in the writing process, as well as the features and conventions of the writing genre or text structure; and (3) provision of feedback guided by the information explicitly taught. Several specific instructional approaches found to be effective are described, including Self-Regulated Strategy Development, the integration of technology with writing instruction, and the Early Literacy Project, which emphasizes collaboration in early writing. Also addressed are issues in preparing students with disabilities to participate in statewide writing proficiency assessments, including student preparation and professional development for teachers. Contact information for all programs is provided. (DB)

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RESEARCH Connections in Special Education

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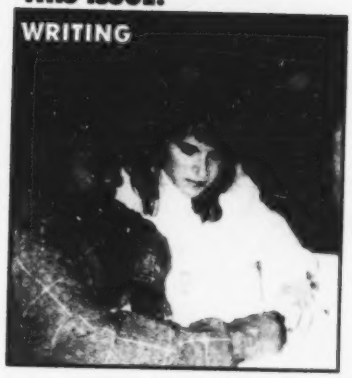
Strengthening the Second "R"

Helping Students with Disabilities Prepare Well-Written Compositions

THIS ISSUE:

WRITING



FOR MORE THAN TWO DECADES, THE U.S. OFFICE OF SPECIAL EDUCATION PROGRAMS (OSEP) HAS SUPPORTED RESEARCH TO IMPROVE THE WRITING SKILLS OF STUDENTS WITH DISABILITIES. THIS *RESEARCH CONNECTIONS* TAKES A LOOK AT CURRENT FINDINGS.

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Each day in classrooms across the country, students are expected to prepare narrative, persuasive, and informative writings. They are asked to demonstrate their learning in different subjects through writing. Moreover, high stakes assessments of achievement often measure students' competency in and through writing.

With the *Individuals with Disabilities Education Act* (1997), student participation and progress in the general curriculum, as well as on State and district-wide assessments, was further emphasized. If students with disabilities are to achieve to their potential, they must know how to write.

Unfortunately, writing poses significant challenges for many students with disabilities. When compared to the writings of their nondisabled peers, the writings of students with disabilities typically contains more mechanical errors and is less polished, expansive, coherent, and effective.

However, there is hope. "Research shows that students with disabilities can be taught to write and to write better," **Scott Baker**, researcher at the Eugene Institute at the University of Oregon tells us. Together with his colleague, **Russell Gersten**, Baker prepared—with OSEP support—a meta-analysis of research on teaching expressive writing to students with learning disabilities. Virtually all the interventions analyzed were multifaceted and involved students writing everyday as part of the curriculum. They identified several themes critical to effective writing instruction:

- Adherence to a basic framework of planning, writing, and revision.
- Explicit instruction of critical steps in the writing process, as well as the features and conventions of the writing genre or text structure.
- Provision of feedback guided by the information explicitly taught.

"We also found that while special educators often like to say that special techniques are good for all children, the research actually shows that effective writing interventions do, in fact, benefit all children, including those who are high-achieving writers," Baker adds.

Some of the researchers highlighted in the meta-analysis have been studying how to improve student writing since the early 1980s. Several research-based approaches—including strategy instruction, assistive technology, and the use of collaborative spaces—are presented in this *Research Connections*.

WHAT WE'VE LEARNED

Instructional Approaches that Improve Written Performance

With OSEP support, researchers are developing approaches that enhance students' performance on written compositions. The following examples show that effective instruction cannot take place in isolation of a strong writing program—it must take place within the context of a rich literacy environment.

Strategy instruction combined with self-regulation procedures is an effective way to teach students with disabilities to write.

STRATEGIES FOR COMPOSITION AND SELF-REGULATION

Third grade Ablard could barely write a sentence on his pre-test. But just six weeks later, he composed the following:

> Once a pond time. There was a boy named Ablard. It happened at 11, 2000. In the Math and Science Center. Ablard wanted to be a writer. Ms. Smith came to the school. Ms. Smith tryed to teach Ablard how to writing. Then she taught him POW. Then he became a great writer. He feel so happy that he will be a story writer when he grow up.

Ablard is an example of the hundreds of students who have been taught to write with the Self-Regulated Strategy Development (SRSD) approach pioneered and researched by **Karen Harris** and **Steve Graham**. With SRSD, students are taught writing strategies explicitly—such as POW in Ablard's example [see sidebar]—and are taught how to use self-regulation procedures (e.g., goal-setting, self-monitoring, self-instruction, and self-reinforcement) to help manage the use of these strategies, the writing process, and their actions during writing.

"We deliberately designed SRSD with students with learning disabilities and other severe learning difficulties in mind—although students in general education also have been found to benefit," Harris and Graham point out. "As a result, SRSD directly addresses affective, behavioral, and cognitive needs." [See the sidebar for goals of the SRSD approach.]

THE POW STRATEGY

1. **Plan** what to say.
2. **Organize** what to say.
3. **Write** and say more.

In the SRSD approach, teachers begin by addressing student attitudes. "Many students early on have developed negative attitudes about their ability to write," Harris says. "Teachers need to help students understand that while writing does require some effort, making the effort to learn the strategy and use it well will enable them to write." From here, teachers follow a sequence to introduce and integrate the strategy and self-regulation components of SRSD:

- Teacher and students work together to develop student background knowledge and pre-skills needed to learn to use the strategy.
- Teacher and students discuss the strategy. This includes providing a rationale for the strategy, as well as explaining each step (e.g., POW). Teachers point out any mnemonics involved in its use. For example, when working on an opinion essay, students may plan what to say using TREE—note Topic sentence, note Reasons, Examine reasons, and note Ending. [Note: Lesson plans for

GOALS OF SRSD

- To assist students in mastering the higher level cognitive processes involved in the planning, production, revision, and editing of written language.
- To help students further develop the capability to monitor and manage their own writing.
- To aid students in the development of positive attitudes about writing and themselves as writers.

POW and TREE are available on line at **http://www.vanderbilt.edu/CASL/**.] Self-regulation is built into use of the strategy. Finally, students learn when to use the strategy.

- Teacher models the self-regulated use of the strategy collaboratively as much as needed by individual students.
- Students memorize the strategy.
- Teacher supports strategy use. Students employ the strategy and self-regulation procedures as they compose. Teachers provide as much support as needed.
- Students transition to independent performance.

"SRSD is not a pre-packaged model," Graham adds. "The approach can be individualized for students and should be thought of as part of a total writing program."

Harris and Graham offer the following suggestions for teachers getting started with SRSD:

- Start with one strategy and take it slowly.
- Look for evidence that students' writing is improving.
- Be flexible. For example, some students may need more modeling or more explicit goal setting than others.
- Let students progress at their own pace. Teachers should not plan to teach a strategy in a set period of time.
- Supply charts with strategies on them to aid students' memorization.
- Offer motivation and encouragement. Point to evidence that shows students are writing.
- Provide booster sessions for previously learned strategies as needed.
- Ask students what is working and not working.

More than 20 empirical studies—some conducted with OSEP support—have shown the efficacy of the SRSD approach in helping students become better writers. Improvements have been found in

- Quality, length, and structure of compositions.
- Planning, revising, substantive content, and mechanical concerns.

"What's more," Harris adds, "The improvements have consistently been maintained over time."

Self-Regulated Strategy Development in Inclusive Classrooms

"All children benefit from the SRSD approach," says **Barbara Danoff-Friedlander**, special education resource teacher at Georgian Forest Elementary School in Maryland. "The difference is in instructional emphasis—whereas nondisabled students may learn the strategy and immediately start using it to improve their writing, students with disabilities may need more scaffolded instruction and more practice before they are can use the strategy independently. The great part is they all benefit!"

As a co-teacher in a school that embraces a total inclusion model, Friedlander assists general education teachers in implementing the SRSD approach. All students in the class receive instruction in a particular strategy. In some cases, students with disabilities set their own performance criteria. "Both the general education teachers and students like the strategy instruction," Friedlander points out. "It helps all students—especially students with disabilities—feel more confident tackling writing assignments because they have a clear sense of how to do it."

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RESOURCE

The Center to Accelerate Student Learning (CASL) Handwriting Program

Difficulties with handwriting can constrain a child's development as a writer. Students are often judged and graded on their penmanship as much as on the content of their writing. A child's ability to communicate may be compromised whenever part of the text is illegible. Children whose writing is slow often produce incomplete work, as their writing is not produced fast enough to keep up with their thoughts.

Teaching handwriting skills is one means of preventing handwriting problems. The CASL Handwriting Program, which has been successfully field-tested in first grade classrooms with students with disabilities—is designed to teach children how to write letters accurately and fluently. The program contains 27 lessons that supplement regular instruction in penmanship.

Funded by OSEP, the Center to Accelerate Student Learning (CASL) identifies instructional practices that accelerate the learning of children with disabilities in Kindergarten through Grade Three. The handwriting program described here can be ordered at **http://www.vanderbilt.edu/CASL/reports.html**. For a description of the program, see: Graham, S., Harris, K., & Fink, B. (2000). Extra handwriting instruction: Prevent writing difficulties right from the start. ***TEACHING Exceptional Children***, ***33***(2), 88-91.

Instructional Approaches (continued)

Pre- and post-intervention samples of student writings are compared to assess progress. Results are shared with parents and IEP team members.

Friedlander offers the following tips when implementing the SRSD approach:

- Implement one strategy at a time. Ensure that students are successful with each strategy before adding others.
- Model, model, model! Continuously model the strategy to help students internalize it.
- Match strategies to student need. Only teach strategies that students need.

INTEGRATING TECHNOLOGY WITH WRITING INSTRUCTION

For more than two decades, researcher **Charles "Skip" MacArthur** and his colleagues have conducted research—some with OSEP support—on how technology can support writing. MacArthur is quick to point out that while research on assistive technology for writing still is quite limited, the absence of research on a particular tool should not be taken to mean that the tool is not effective. "It is also important to keep in mind that the impact of computer tools may increase as more powerful versions are developed," MacArthur adds. He cites the example of speech recognition technology, which has changed rapidly in recent years, resulting in early research on its efficacy becoming outdated.

"Most research on assistive technology in writing has focused on word processing and special tools designed to support transcription," MacArthur says. "However, research is emerging in other areas." Promising areas in which technology can help support student writing are:

- Software can assist with the basic processes of transcription and sentence generation (e.g., spelling checker, speech synthesis, word prediction, and grammar and style checkers).
- Applications can support the cognitive processes of planning (e.g., prompting programs, outlining and semantic mapping software, and multimedia applications).
- Computer networks can support collaboration and communication, which are important elements of the writing process.

> "Speech recognition devices take some additional effort—you must teach students how to dictate and proof their work. But the results pay off, especially for those students who are very well-spoken when asked to provide verbal information, but who typically fail to communicate when asked to write the same information."
>
> Linda Tascione
> Special Education Teacher
> Del Castle High School

While the potential of technology in these different areas abounds, MacArthur provides an important caveat. "Technology without special writing instruction has little impact," MacArthur asserts. "However, when the two are carefully integrated, research has shown some promising results, such as easing the physical processes involved in writing, helping to manage planning and revising processes, and supporting social interaction and communication." MacArthur cites the example of findings from early research studies he and **Steve Graham** conducted. "Simply having access to word processing has little impact on the revising behaviors of students with learning disabilities," MacArthur explains. "However, we found that instruction in revision in combination with word processing can significantly increase the amount and quality of revision by students."

MacArthur also cautions that use of a technology tool may impose an additional burden on the student. "It is important to keep in mind issues of motivation, burden on working memory, and training," MacArthur says. "The technology tool may remove one burden (e.g., handwriting), but impose yet another (e.g., poor typing may slow text production—which may take attention away from the content of writing)."

The research on speech recognition technology is an example. Recent research suggests that students with writing disabilities might be able to use the technology for dictation—especially in light of research showing that for students with learning disabilities in the upper elementary and middle school grades, dictated compositions are substantially longer and qualitatively superior to compositions written via handwriting or word processing.

In fact, MacArthur and his colleagues found that students with learning disabilities produced better essays when dictating to either scribes or speech recognition systems than they did when handwriting them. Despite the potential benefits, speech recognition systems place specific demands on students. For example, users must be trained to use the system, which includes speaking clearly without extraneous sounds, pronouncing punctuation, and correcting errors—all of which may interfere with the student's ability to compose. [The speech recognition study is available online at **http://www.doe.state.de.us/aab/DSTP_research.html**, Attachment #11.]

According to MacArthur, teachers may enhance their effectiveness and avoid such difficulties in part by making sure that students

- Understand the limitations of the tool.
- Want to use the tool.
- Have sufficient training in using the tool.

A "COLLABORATIVE SPACE" FOR WRITING

"To become successful writers, students must acquire the ways-of-thinking and ways-of-talking about literacy," researcher **Carol Sue Englert** points out. "Emphasis is placed on the interactions of teachers and students in literacy communities in which the production, rather than the reproduction, of knowledge is viewed as the goal of instruction." To this end, Englert, with OSEP support, developed the Early Literacy Project (ELP).

"ELP began as a collaborative effort with special and general education teachers," Englert explains. "Its purpose was to design and evaluate a curricular approach that adhered to the principles of social constructivism for primary grade students with mild disabilities." Englert's research has proven the efficacy of ELP in the development of literacy; it also has uncovered some areas to which teachers should pay particular attention. Understanding interactions in "collaborative spaces" is one such area.

In the ELP approach, students plan, organize, compose, and edit a class paper. Teachers model and introduce the particular writing strategies and text structures. However, students also need meaningful practice in applying the strategies with coaching and support before they are able to write a composition independently. To this end, students work with partners or in small groups to apply the strategies before writing independently. The time spent providing and receiving support from peers is called a "collaborative space."

"Different spaces offer unique learning opportunities," says Englert. "If we don't understand what these spaces may afford, we may lose the opportunities to accelerate and develop literacy." For example, working with peers often provides unique opportunities for students to use the self-talk of writers, share writing strategies, justify their ideas, and share what they know—all of which deepen their understanding while revealing where they may need help.

Englert points out that teachers can learn much about students by observing their collaborative interactions. "Teachers can note how their literacy skills are unfolding and what areas are in need of development, "Englert explains. "Such information can prove valuable when planning subsequent instruction."

Englert and her colleagues have found that the use of collaborative spaces has advanced students' independent writing performance. "For example, we find that beginning writers are quite capable of taking up more advanced writing tools after participating in collaborative spaces," says Englert. "The small and intimate situation promotes students' efforts to engage with the writing tools, text structures, and dialogue. It provides opportunities for students to step into the higher-level practices associated with monitoring, questioning, and constructing text that would otherwise be inaccessible to them in whole class contexts or independent writing arrangements."

A Collaborative Space for Writing in the Classroom

Special education teacher **Karen Hicks** co-teaches with general education teacher **Traci Shepard** in an inclusive first through third grade classroom at Walnut Elementary School in Michigan. Hicks studied with Englert and is well-versed in implementing the ELP model.

"We find that students need the collaborative space before they can be successful with independent writing," Hicks says. "First we model the practice, then the students work together practicing the model. We monitor the groups, providing additional modeling as necessary."

Hicks has found that the collaborative space enables teachers to address all levels of performance. "We can have high expectations for all students because the process itself allows all students to participate." For example, Hicks says that younger children in the class may use the same talk as the older children, although their writings may look different (e.g., a four sentence composition versus a ten sentence one).

According to Hicks, the approach takes time and reflection to implement. Here are some suggestions:

- Show children what the process looks like.
- Model the text structures and writing strategies.
- Help students learn how to work together (e.g., model for students how to share supplies).
- Interact with students as you monitor them.
- Become an expert at modeling the approach. For example, Hicks describes a technique in which she signals to students to listen and comment while she points to specific aspects of a student's work. "Listen to Frank and Joe's topic sentence. What makes it a good topic sentence?"

VIEWS FROM THE FIELD

Helping Students with Disabilities Participate in Statewide Writing Proficiency Assessments

"Writing is an area where research-based teaching strategies can immediately be put into practice. And since special education students are included in state assessments, virtually all of which include a writing sample, it is phenomenally timely."

Russell Gersten
Researcher
University of Oregon

The 1997 Reauthorization of the Individuals with Disabilities Education Act (IDEA) provides that students with disabilities will participate in state and district-wide assessments, with accommodations and modifications as necessary. Many of these large-scale assessments measure achievement in writing. Emerging research is shedding light on what practitioners may do to ensure that students participate and achieve to their potential on such assessments.

PREPARE STUDENTS FOR LARGE-SCALE ASSESSMENTS

To help teachers prepare their students for State assessments that measure writing, many states provide teachers with a rating scale and examples of essays that meet the criteria. However, that may be insufficient. 'All students, but particularly those with disabilities, need teachers to make the writing task explicit," says researcher **Susan De La Paz**.

In the context of helping students prepare for statewide assessments of writing performance, De La Paz's research—which has received OSEP support—has focused on helping teachers implement the Harris and Graham SRSD approach. "Having a strategy to use when prompted to write an essay helps students feel comfortable and enables them to do their best," De La Paz points out.

In one study, De La Paz worked with teacher **Bonnie Owen** to prepare students for a state assessment using the writing strategy PLAN and WRITE (see sidebar). "The mnemonics of PLAN and WRITE are used to help students remember strategy steps," De La Paz explains. "They serve as a reminder to plan before starting to write and to reflect on qualities of good writing while composing."

Positive results were found for students with learning disabilities, as well as low-, average-, and high-achieving writers. "Research has shown that students with disabilities can be taught SRSD strategies in the general education classroom and that general education teachers can effectively teach them," De La Paz adds.

PROVIDE PROFESSIONAL DEVELOPMENT FOR TEACHERS

"Many teachers have participated in workshops on the writing process, but find themselves frustrated in their early attempts to apply what they've learned to students with disabilities," **Steve Isaacson**, researcher at Portland State University tells us. "Teachers want explicit strategies and clear procedures for implementing the strategies with students with diverse learning needs."

EXPOSITORY PLANNING STRATEGY

PLANNING STRATEGY—PLAN

Pay attention to the prompt.

List main ideas.

Add supporting ideas.

Number your ideas.

CONTINUE PLANNING PROCESS WHILE COMPOSING YOUR ESSAY—WRITE

Work from your plan to develop your thesis statement.

Remember your goals.

Include transition words.

Try to use different kinds of sentences.

Exciting, interesting, $100,000 words.

Source: De La Paz, S., Owen, B., Harris, K., & Graham, S. (2000). Riding Elvis' Motorcycle: Using self-regulated strategy development to PLAN and WRITE for a state writing exam. ***Learning Disabilities Research and Practice, 15***(2), 101-109.

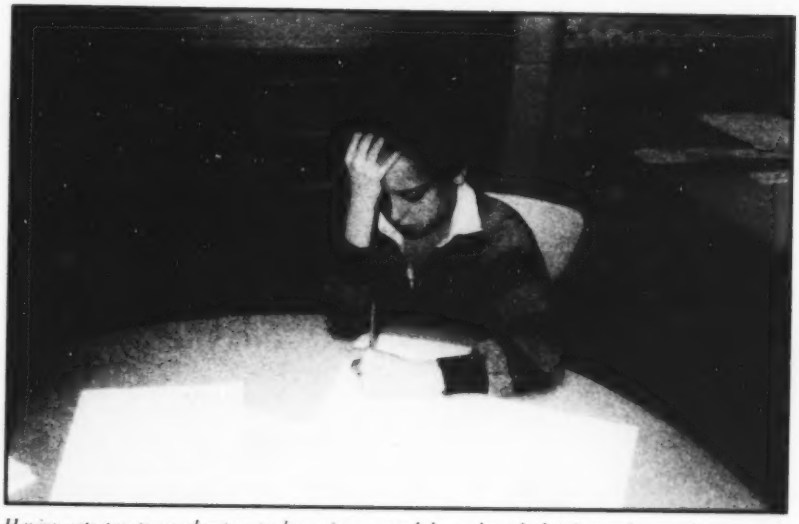
The State of Oregon assesses students on their written performance. As part of a statewide initiative to improve the writing skills and enhance the participation of students with disabilities in these assessments, Isaacson has been conducting professional development sessions for teachers on how to improve students' written performance.

Training content includes a synthesis of research on effective writing instruction for students who have difficulty writing. Modeling differentiates Isaacson's approach from traditional lecture modes of delivery. "Teachers want to

see actual lessons. And, they want to see how instructional strategies look," Isaacson explains. To this end, Isaacson organizes the agenda to include a substantial amount of modeling. "I conduct actual mock lessons in which I demonstrate from start to finish how teachers might use the strategy with their students—how to introduce the strategy, how to explain the steps for using the strategy, how to model the strategy, and how to support students in using the strategy," Isaacson describes. "Often teachers have the same 'aha' experience as the students do when they grasp how a particular strategy can enhance writing performance."

Over the years, Isaacson has learned much about addressing teachers' needs as they relate to teaching writing. Specific tips for other trainers include

- Address accommodations for students who have trouble with the mechanics of writing. Students do not learn the mechanics (e.g., spelling, punctuation, handwriting) of writing on their own, and teachers need effective ways of assisting students in overcoming any mechanical obstacles to writing. Isaacson cautions that teachers should select research-based accommodations that are suitable for the particular students. [See Isaacson and Gleason, *Mechanical Obstacles to Writing*, for an excellent review of accommodations.]
- Show teachers good examples of writing. For each genre of writing, have numerous examples to illustrate different features.
- Encourage teachers to write. Part of teaching writing is modeling the writing process for students. Therefore, have teachers produce written compositions during the session and engage them in a structured review of how their writings meet exemplary criteria. Have them apply strategies to their own writing.
- Integrate basals into the session content. Many teachers use basals to teach the writing process. Although basals offer a solid base, many are inadequate to address the needs of students with writing difficulties. Therefore, it often is helpful to recommend modifications in the context of the participants' basal series, such as adding modeling to the instruction, making parts of instruction more explicitly procedural, and providing supports for helping students use strategies independently.



Having a strategy to use when prompted to write an essay helps students do their best on large-scale assessments.

RESOURCE

National Network of Writing Trainers

"We are getting excellent results with our writing strategies," says **Jeanne Schumaker**. "For example, in one Michigan high school, 94 percent of our students passed the state competency exam in writing, compared to the overall 75 percent average for high schools."

With OSEP support, Schumaker and her colleague at the University of Kansas, **Don Deschler**, developed and evaluated four written expression learning strategies appropriate at the secondary level. The writing strategies are

- **Sentence-Writing Strategy**. Students learn to write four types of sentences: simple, compound, complex, and compound-complex.
- **Paragraph-Writing Strategy**. Students learn a specific process for writing expository paragraphs.
- **Error-Monitoring Strategy**. Students learn how to monitor their written work through self-questioning, thus allowing them to cope more effectively with the curriculum demands related to written assignments.
- **Theme-Writing Strategy**. Students learn to write themes, reports, and other products that contain several paragraphs.

Schumaker and Deschler have packaged their research on writing into a professional development program complete with a national network of trainers. For more information, contact Schumaker at: University of Kansas, 517 J.R. Pearson, 1122 West Campus, Lawrence, KS 66045, 785-864-4780.

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Jane Burnette, Publications Manager, ERIC/OSEP Special Project

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